

In cross section these are shown to have a loosely cellular structure, consisting of thin-walled parenchyma, with a few slender, scarcely lignified vascular bundles interspersed. Mr. C. S. Hudson examined these corms and states that they contain no starch. We have not as yet obtained a sufficient quantity to enable him to determine the chemical nature of the cell contents.

The connecting rootstocks or runners are 3 to 10 or 15 cm. long, about 1 mm. thick, obscurely angled, with irregular internodes, and sparingly branching or simple. The thin scales are often reduced to shreds.

The illustration shows one of the moniliform corms with runners connecting it to young plants. Two very young buds may be seen at the nodes and a third short runner with a slightly swollen internode at the end.

The habit here shown is unlike that of any grass so far as we know, *Panicum bulbosum* H. B. K. most nearly approximating it. At first sight these moniliform corms suggest some pathological condition or that the swellings may be occupied by nematodes but a dozen or more of these corms were dissected without finding either worms or diseased tissue.

It would be greatly appreciated if local botanists will examine colonies of either species of *Cinna* for these subterranean organs and send specimens fresh if possible to the writer at the Department of Agriculture.

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## ERUCASTRUM POLLICHII ADVENTIVE IN AMERICA.

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THE difficulty which has been experienced in ascertaining the precise dates and places at which some European plants, such as *Lactuca Scariola* L., *Sisymbrium altissimum* L., *Brassica juncea* (L.) Cosson., etc., now widely distributed as weeds in America, first reached our continent, suggests the desirability of putting promptly on record the appearance of such related species as may be discovered getting a foothold upon American soil, for these also may in future become equally important elements in our flora.

Some five years ago Mr. William Finger sent to the Gray Herbarium for identification a *Sisymbrium*-like crucifer, which he had collected, 18 October, 1903, along the tracks of a suburban electric line, just beyond the city-limits of Milwaukee. On comparison with European specimens in the Gray Herbarium the plant was determined by the writer as *Diplotaxis bracteata* Gren. & Godr. At the time there appeared to be no record of any other American occurrence of this species, and its single appearance at Milwaukee, a manufacturing and shipping center, seemed too casual to warrant published record.

Some weeks ago Miss Martha Louise Loomis of Sherborn, Massachusetts, sent to the Gray Herbarium for determination another specimen of the same species. It was one of two individuals, which she had discovered and collected in gravelly soil beside the railroad at Sherborn, 4 September, 1910. This second station, at a great distance from the first, suggests that the species is likely to turn up elsewhere in America, possibly to spread and become established in the manner of its near relatives *Diplotaxis muralis* (L.) DC. and *D. tenuifolia* (L.) DC. Though the plant is not yet so firmly fixed as to justify its inclusion in our manuals, there seem to be grounds for putting its American occurrence on record and assembling for the convenience of local botanists its rather extended synonymy. From the latter it will be seen that recent and excellent European authorities are inclined to recognize the validity of the genus *Erucastrum* and maintain it as a convenient disposition for a dubious group of plants which, though in most respects similar to *Diplotaxis*, lack the double row of seeds characteristic of that genus. This view being accepted and the international rules of nomenclature applied, the species may be recorded as follows:

*ERUCASTRUM POLLICHII* Schimp. & Spenn. Fl. Frib. iii. 946 (1829); Coste, Fl. Fr. i. 80 (1901); Garcke, Fl. Deutschl. ed. 20, 345, f. 1064 (1908); Schinz & Keller, Fl. d. Schw. ed. 3, 237 (1909). *Sisymbrium Erucastrum* Poll. Hist. Pl. Palat. ii. 284 (1777). *Brassica Erucastrum*,  $\beta$  *ochroleuca* Gaud. Fl. Helv. iv. 381 (1829). *E. inodorum* Reichenb. Fl. Excurs. 693 (1830), and Ic. Fl. Germ. ii. t. 89, f. 4428 (1837-8). *Sisymbrium hirtum* Host. Fl. Aust. ii. 261 (1831). *Brassica ochroleuca* Soy.-Will. Ann. Sci. Nat. ser. 2, ii. 116 (1834). *Sisymbrium gallicum* Schleich. ex Soy.-Will. l. c., in synonym. *Diplotaxis bracteata* Gren. & Godr. Fl. Fr. i. 81 (1847); Rouy & Fouc. Fl. Fr. ii. 44 (1895). *Brassica obtusangula*, var.  $\beta$  *Pollichii* Archang. Comp. Fl. Ital. 45 (1882), and ed. 2, 267 (1894). *Erucastrum bracteatum* St. Lag. in Cariot, Etude d. Fl. ed. 8, ii. 54 (1889).—Annual, erect or ascending,

2-4 dm. high, with habit somewhat as in *Sisymbrium altissimum*; stem retrorsely pubescent, the hairs being simple; leaves oblong in general outline, deeply pinnatifid to decidedly bipinnatifid, the lobes rounded, the sinuses broad and usually obtuse or truncate; racemes at length elongated, loose, the pedicels slender, ascending or so widely spreading as to be nearly horizontal, in fruit 6-10 mm. long, the lower ones subtended by distinct (though much reduced) leaves or leaflike bracts; flowers of medium size; petals pale yellow, 5 mm. in length; pods linear, subterete, 2.5-3.5 cm. long, 1-2 mm. in thickness, tipped with a slender style about 3 mm. long; seeds essentially in a single row in each cell.— Widely distributed in Central and Western Europe; adventive along railways, Milwaukee, Wisconsin, *Wm. Finger*, and Sherborn, Massachusetts, *Miss M. L. Loomis*.

Little difficulty should be experienced in recognizing this species, for its characteristic bracts, though not specially conspicuous, are readily seen and form a feature unusual in cruciferous plants.

GRAY HERBARIUM.

## POPULUS VIRGINIANA AND P. ANGULATA.

H. H. BARTLETT.

IN American botanical works it is customary to include in the synonymy of *Populus deltoides* several names which are maintained in Europe for trees of marked specific characters. Thus, Schneider<sup>1</sup> distinguishes three species, *Populus deltoides*, *P. monilifera* and *P. angulata* in place of the *P. deltoides* of our manuals. In his *Elysium Marianum*, Mr. Tidestrom<sup>2</sup> maintains the first and second of these three as distinct (under the names *Aigeiros deltoides* and *A. virginiana*) but the third is not recognized in any current American work. Last October the writer found *Populus virginiana* and *P. angulata* growing abundantly on both the South Carolina and Georgia sides of the Savannah River, at Augusta. They were so clearly different species that specimens were collected for identification by Mr. Tidestrom, who is now studying the poplars.

<sup>1</sup> *Illustriertes Handbuch der Laubholzkunde*, i, pp. 7-9 (1904).

<sup>2</sup> *Elysium Marianum*, iii, part 13, pp. 16-17 (1910).